2.0 Edgemont

Edgemont Site Long-Term Custody Compliance Requirements

The following list comprises the long-term custody requirements for the Edgemont site as defined in Section 3.2 of the site Long-Term Surveillance Plan:

1. Annual site inspection.

2. Annual inspection report.

3. Follow-up inspections and inspection reports, as necessary.

4. Site maintenance as necessary to sustain design functions.

5. Emergency measures in the event of catastrophe.

6. Environmental monitoring as required.

The Edgemont site long-term custody compliance requirements were fulfilled for 2003 as follows:

1. The site was inspected on June 4, 2003, in accordance with the inspection procedure as outlined in Section 3.3.2 of the Long-Term Surveillance Plan (LTSP).

2. This document serves as the annual inspection report.

3. No follow-up inspections were necessary.

4. No maintenance was necessary to sustain design functions.

5. No catastrophic events necessitated emergency measures.

6. The condition of the grass-covered features of the site was inspected and continue to function as designed. There is no ground water monitoring required for this site.

Edgemont Site Inspection Results

The inspection was conducted on June 4, 2003, by T. G. Kirkpatrick (Chief Inspector) and M. R. Widdop (Assistant Inspector), both of S.M. Stoller Corporation, the Technical Assistance Contractor at the DOE Grand Junction Office (GJO). The inspection was conducted in accordance with (1) the Long-Term Surveillance Plan (LTSP) for this site, *Long-Term Surveillance Plan for the DOE Tennessee Valley Authority (UMTRCA Title II) Disposal Site Edgemont, South Dakota, June 1996*, and (2) procedures established by DOE to comply with requirements of Title 10 *Code of Federal Regulations* Part 40.28 (10 CFR 40.28).

The purposes of the inspection are to confirm the integrity of visible features at the site, to identify changes in conditions that may affect site integrity, and to determine the need, if any, for maintenance or additional inspections and monitoring.

Photographs to support specific observations are identified in the text and on Figure 2–1 by photograph location (PL) numbers. Three photographs are included in this report.

Access Road, Entrance Gate Area, Fencing, and Boundary Monuments

Access to the Edgemont disposal site is immediately off an all-weather county road and is unimpaired.

The tubular metal entrance gate is secured by a padlocked chain and is in excellent condition. The site marker and site entrance sign also are in excellent condition.

A four-strand barbed-wire fence was installed in spring 1999 along the site boundary to demarcate DOE property and to control grazing on the property. The entire fence line was walked to inspect the fence and the boundary monuments. Minor fence repairs, including tightening two strands of wire on the west boundary and reattaching wire to the t-posts, were conducted during the inspection. Based on the condition of the range inside the fence on site property versus outside the fence, the fence is adequately preventing unauthorized grazing. The fence is in excellent condition (PL–1).

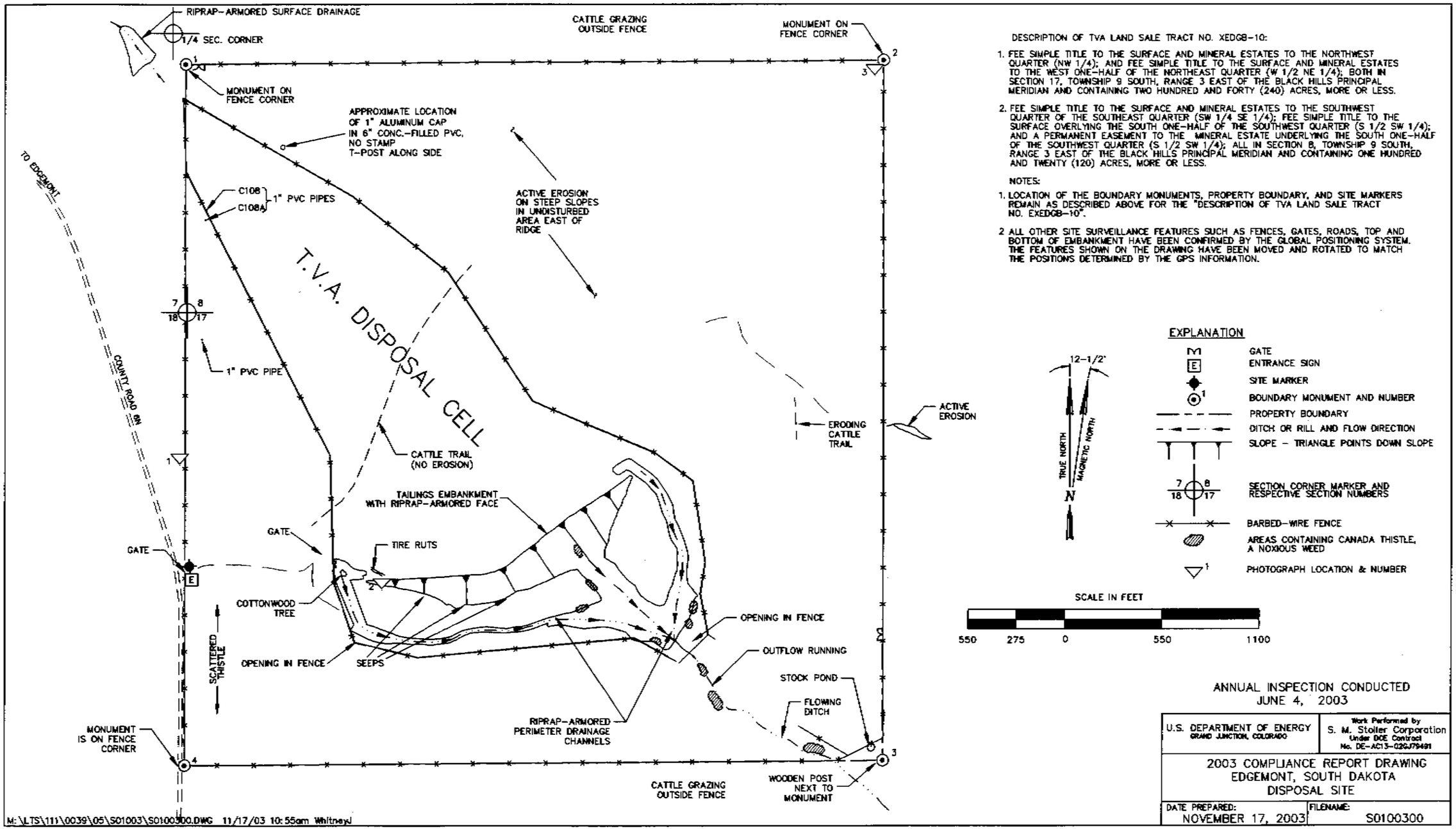
The four boundary monuments are undisturbed and in excellent condition.

Top of Disposal Cell

The 100-acre top of the disposal cell is grass-covered. DOE manages the grass cover through controlled grazing. There were no cattle on site the day of the inspection and there was no evidence of cattle grazing on the site yet in 2003. The grass is well established and was not over-grazed when inspected. Inspectors did not observe any indications of erosion, settlement, or other modifying processes on the disposal cell top. A cattle trail has developed in an east-west direction across the top of the cell. The grazing permittee stopped the cattle from traveling this trail by re-establishing the interior fence where it crosses the trail. Erosion is not currently a problem at the trail but the area should be monitored until grass is re-established.

Tailings Dam Face and Drainage and Diversion Ditches

The tailings dam face, the steepest slope on site, is covered with riprap. The slope is stable and the riprap shows no signs of degradation. Scattered plants, mostly grass, grow in the riprap (PL–2). These plants do not pose an immediate threat to stability or function of this structure. The plant density has not increased over the last few years. Plant density in the riprap dam face will continue to be evaluated during future inspections.



DESCRIPTION OF TVA LAND SALE TRACT NO. XEDGB–10:

1. FEE SIMPLE TITLE TO THE SURFACE AND MINERAL ESTATES TO THE NORTHWEST QUARTER (NW 1/4); AND FEE SIMPLE TITLE TO THE SURFACE AND MINERAL ESTATES TO THE WEST ONE–HALF OF THE NORTHEAST QUARTER (W 1/2 NE 1/4); BOTH IN SECTION 17, TOWNSHIP 9 SOUTH, RANGE 3 EAST OF THE BLACK HILLS PRINCIPAL MERIDIAN AND CONTAINING TWO HUNDRED AND FORTY (240) ACRES, MORE OR LESS.

2. FEE SIMPLE TITLE TO THE SURFACE AND MINERAL ESTATES TO THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW 1/4 SE 1/4); FEE SIMPLE TITLE TO THE SURFACE OVERLYING THE SOUTH ONE–HALF OF THE SOUTHWEST QUARTER (S 1/2 SW 1/4); AND A PERMANENT EASEMENT TO THE MINERAL ESTATE UNDERLYING THE SOUTH ONE–HALF OF THE SOUTHWEST QUARTER (S 1/2 SW 1/4); ALL IN SECTION 8, TOWNSHIP 9 SOUTH, RANGE 3 EAST OF THE BLACK HILLS PRINCIPAL MERIDIAN AND CONTAINING ONE HUNDRED AND TWENTY (120) ACRES, MORE OR LESS.

NOTES:

1. LOCATION OF THE BOUNDARY MONUMENTS, PROPERTY BOUNDARY, AND SITE MARKERS REMAIN AS DESCRIBED ABOVE FOR THE "DESCRIPTION OF TVA LAND SALE TRACT NO. EXEDGB–10".

2 ALL OTHER SITE SURVEILLANCE FEATURES SUCH AS FENCES, GATES, ROADS, TOP AND BOTTOM OF EMBANKMENT HAVE BEEN CONFIRMED BY THE GLOBAL POSITIONING SYSTEM. THE FEATURES SHOWN ON THE DRAWING HAVE BEEN MOVED AND ROTATED TO MATCH THE POSITIONS DETERMINED BY THE GPS INFORMATION.

EXPLANATION

- GATE
- E — ENTRANCE SIGN
- SITE MARKER
- 1 — BOUNDARY MONUMENT AND NUMBER
- PROPERTY BOUNDARY
- DITCH OR RILL AND FLOW DIRECTION
- SLOPE – TRIANGLE POINTS DOWN SLOPE
- 7/18 8/17 — SECTION CORNER MARKER AND RESPECTIVE SECTION NUMBERS
- BARBED–WIRE FENCE
- AREAS CONTAINING CANADA THISTLE, A NOXIOUS WEED
- 1 — PHOTOGRAPH LOCATION & NUMBER

12–1/2°
TRUE NORTH
MAGNETIC NORTH
N

SCALE IN FEET
550 275 0 550 1100

ANNUAL INSPECTION CONDUCTED
JUNE 4, 2003

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO	Work Performed by S. M. Stoller Corporation Under DOE Contract No. DE–AC13–02GJ79491
2003 COMPLIANCE REPORT DRAWING EDGEMONT, SOUTH DAKOTA DISPOSAL SITE	
DATE PREPARED: NOVEMBER 17, 2003	FILENAME: S0100300

Figure 2–1. Edgemont, South Dakota, 2003

Water was present in the drainage outlet below the tailings embankment during the 2003 inspection. The drainage outlet is the lowest point on site and most of the precipitation that falls on the site exits there. There was more water present in the drainage during this inspection than during the 2002 inspection, a result of greater amounts of precipitation falling on the site during the spring and early summer of 2003. Wetland vegetation has established in the drainage outlet below the dam.

Diversion and drainage ditches are grass-covered (upgradient) and riprap-armored (down gradient and on steeper slopes). Minor amounts of vegetation occur in the riprap. The vegetation density may increase over time and should be monitored. However, as discussed above with respect to the riprap-covered tailings dam face, the vegetation density does not appear to have increased in the last few years. Grass in the vegetated portions of the drainage ditches is dense and healthy. There is no erosion.

The riprap-armored drainage channel at the northwest corner of the site property was stable and in good condition.

Area Between the Disposal Cell and the Site Perimeter

The area between the disposal cell and the site perimeter is grass-covered. This area is also grazed in a controlled manner. The grass is well established but minor erosion persists on steeper portions of the site east of the ridge that separates the northeast portion of the site property from the area containing the tailings cell (PL–3). This erosion does not threaten the integrity of the stabilized tailings.

Livestock watering tanks present on site during the 2002 inspection had been removed. There was no other evidence of livestock grazing on the site during the 2003 growing season.

Outlying Areas

The areas surrounding the Edgemont site boundary for about one-quarter mile were visually inspected at a distance from the boundary fence. The city of Edgemont operates a municipal landfill north-northwest of the site. An occasional piece of wind-blown trash from the landfill was observed on site or along the fences. Minor erosion was observed along ephemeral watercourses east of the site. Inspectors did not observe evidence of activity or change in land use that could affect the site.

Conclusion

The Edgemont disposal site is in good condition at this time. Minor fence repairs were performed by the inspectors during the inspection. Vegetation colonizing the riprap will continue to be monitored during future inspections.

Edgemont Inspection Photographs

Table 2–1. Photograph Descriptions for Edgemont, South Dakota, Disposal Site

Photograph Location Number	Description
EDG PL–1	Fence line on western property boundary.
EDG PL–2	Embankment face.
EDG PL–3	View of steep bluffs from Boundary Monument 2.

EDG 6/2003. PL–1. Fence line on western property boundary. NOTE: Correct date of photo is 06/04/2003.

EDG 6/2003. PL–2. Embankment face.

EDG 6/2003. PL–3. View of steep bluffs from Boundary Monument 2. NOTE: Correct date of photo is 06/04/2003.